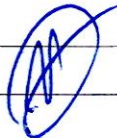


Work Order ID 158694***158694***

Page 1

Wednesday, March 29, 2017 11:53:41 AM

Item ID: D3619-2 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Grommet
Start Date: 4/3/2017 Start Qty: 5.00 ***5*** Cust Item ID:
Required Date: 4/7/2017 Req'd Qty: 5.00 ***5*** Customer:
Reference: scheduled

Approvals: Process Plan:  Date: MAR 29 2017 Tooling: Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3619	Rev A

100	PURCHASING	0.00				5	MAR 30 2017		DAS 13 9-89
100									
Purchasing	Memo	0.00							
Purchasing	Issue P/O: 35789 Purchase Part Number: 9610K18 Supplier: MC								
	MASTER CARR Certificate of conformity is required								

110	Receive & Inspect for Damage & Mat'l Certs	0.00				5x	SP17-4-3		
110									
Packaging	Memo	0.10							
Packaging	Ensure material certification is attached								

120	QC6- Inspect dimensions to drawing	0.00				5			DAS 38 9-89
120									
QC	Memo	0.00							
Quality Control									

APR 04 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	☐ OTHER : _____					
Misidentified ☐	☐ Past Due						

158694

Wednesday, March 29, 2017 11:53:41 AM

N900040100

Setup Start *NS1*

Stop *NS2*

5

Cust Item ID:

Start Date: 4/3/2017 **Start Qty:** 5.00

Required Date: 4/7/2017 **Req'd Qty:** 5.00

5

Customer:

Reference: scheduled

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

**Insp.
Stamp**

0.00

130

Packaging

0.00

Packaging

Memo

Packaging

****Remove supplier paperwork from box.***** Identify and
StockLocation: ST047

Supplier paper:
1: STORM

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.50

Quality Control

Qty **DAS**
6
9-89

APR 03 2012

17/4/4

DAS
21
9-89

APR 03 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

Picklist Print

Wednesday, March 29, 2017 11:53:45 AM

Page 1

Work Order ID: 158694

158694

Parent Item: D3619-2

D3619-2

Parent Item Name: Grommet

Start Date: 4/3/2017

Required Date: 4/7/2017

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP Rev:A New Issue 07-04-09 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
9610K18		Purchased	No			110	Each	0.0000	1	5			
9610K18									**				
GROMMET													

5x SP17-4-3.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

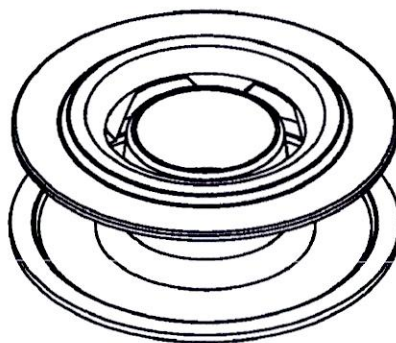
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					



DESIGN <i>LE</i>	DRAWN BY <i>LE</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3619	REV. A SHEET 1 OF 1
DATE 07.03.26		TITLE GROMMET	SCALE NTS
REV A	DATE 07.03.26	DESCRIPTION NEW ISSUE	

SPECIFICATION CONTROL DRAWING

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *158694*
MAD 29 2017



RELEASED
07 04 02

**D3619-X GROMMET,
WHERE X REPRESENTS THE GROMMET TRADE SIZE**

DART P/N	TRADE SIZE	DESCRIPTION	HOLE SIZE	MAX. MTL THICKNESS	MCMaster CARR P/N
D3619-0	0	BRASS GROMMET W/ TEETH	1/4	0.110	9610K16
D3619-1	1	BRASS GROMMET W/ TEETH	9/32	0.120	9610K17
D3619-2	2	BRASS GROMMET W/ TEETH	3/8	0.150	9610K18
D3619-3	3	BRASS GROMMET W/ TEETH	7/16	0.230	9610K19
D3619-4	4	BRASS GROMMET W/ TEETH	1/2	0.300	9610K21

NOTES:

1) PURCHASE INFO: MCMaster-CARR P/N'S INCLUDE THE FOLLOWING:

48 GROMMETS FOR SIZE 0 & 1,
24 GROMMETS FOR SIZE 2, 3 & 4,
D3619-XT1 HOLE PUNCH,
D3619-XT2 STRIKER BLOCK,
D3619-XT3 PUNCH AND
D3619-XT4 DIE

2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

3) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO35789**

Purchase Order Date 3/30/2017

PO Print Date 3/30/2017

Page Number 1 of 2

Order From :

MCMaster-CARR SUPPLY CO,
P.O. BOX 7690
CHICAGO, IL 60680-7690
US

VU-MCM001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA



MAR 30 2017

Contact Name

Vendor Phone 330 995 5500

Ship To Contact

Ship To Phone

Ship Via: Purolator ground ppd

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 10

Currency

USD

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable CD Promise Date	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
	9610K18	GROMMET	4/3/2017 Yes 4/3/2017	5.00 Each	\$13.31	\$66.55
	AS PER DWG D3619 REV. A B158694					
					Line Total:	\$66.55
2	71500-40	8841A21 STEP DRILL 1/8-1/2	4/3/2017 Yes 4/3/2017	10.00 Each	\$19.07	\$190.70
					Line Total:	\$190.70
	Deliver To: GARY					
3	71500-40	7385A52 MAGNET RETRIEVER	4/3/2017 Yes 4/3/2017	1.00 Each	\$9.07	\$9.07

Note:

3/30/2017



200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada
Attention: Gary

Purchase Order
PO35789

Order Placed By
Chantal Lavoie

McMaster-Carr Number
1220824-01

Page 1 of 1

03/30/2017

Line	Product	Ordered	Shipped
1	9610K18 Mil. Spec. Two-Piece Grommet Kit Trade Size 2, 0.815" OD, 24 Grommets with Teeth Washers	5 Each	5 ✓
2	8841A21 Multi-Diameter Step Drill Bit High-Speed Steel, 13 Sizes, 1/8"-1/2", 1/4" Shank Diameter, 1/8" Maximum Thickness	10 Each	10 ✓
3	7385A52 Telescoping Magnetic Retriever High-Visibility Orange, 5-7/8"- 25 7/8" Long, 1-1/2 lb Pull	1 Each	1 ✓

SEP 17-04-3.